IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A titanium alloy ~~comprising~~ consisting of:

when the entirety is taken as 100% by mass,

at least one alloying element selected from the group consisting of molybdenum (Mo), vanadium (V), tungsten (W), niobium (Nb), tantalum (Ta), iron (Fe), chromium (Cr), nickel (Ni), cobalt (Co), copper (Cu) and aluminum (Al) in a molybdenum equivalent "Mo_{eq}" of from 3 to 11% by mass, the molybdenum equivalent determined by the following equation,

$Mo_{eq} = Mo_{mass} + 0.67V_{mass} + 0.44W_{mass} + 0.28Nb_{mass} + 0.22Ta_{mass} + 2.9Fe_{mass} + 1.6Cr_{mass} + 1.1Ni_{mass} + 1.4Co_{mass} + 0.77Cu_{mass} - Al_{mass}$, wherein Mo_{mass}, V_{mass}, W_{mass}, Nb_{mass}, Ta_{mass}, Fe_{mass}, Cr_{mass}, Ni_{mass}, Co_{mass}, Cu_{mass} and Al_{mass} are expressed in percentages by mass;

at least one interstitial solution element selected from the group consisting of oxygen (O), nitrogen (N) and carbon (C) in an amount of from ~~0.5~~ 0.6 to 3% by mass; and

the balance of titanium (Ti);

the content of Al being controlled to 1.8% by mass or less; and

being β single phase at room temperature at least.

Claim 2 (Original): The titanium alloy set forth in claim 1, wherein the interstitial solution element is O.

Claim 3 (Original): The titanium alloy set forth in claim 1 being of flexibility to exhibit a Young's modulus of 70 GPa or less.

Claim 4 (Original): The titanium alloy set forth in claim 1 being of high strength to exhibit a tensile strength of 1,000 MPa or more.

Claim 5 (Original): The titanium alloy set forth in claim 1 being of high elasticity to exhibit an elastic deformability of 1.6% or more.

Claim 6 (Canceled).

Claim 7 (Withdrawn): A process for producing a titanium alloy, comprising:

subjecting a raw titanium-alloy material to a solution treatment,

the raw titanium-alloy material comprising:

when the entirety is taken as 100% by mass,

at least one alloying element selected from the group consisting of Mo, V, W, Nb, Ta, Fe, Cr, Ni, Co, Cu and Al in a molybdenum equivalent "Mo_{eq}" of from 3 to 11% by mass, the molybdenum equivalent determined by the following equation,

$Mo_{eq} = Mo_{mass} + 0.67V_{mass} + 0.44W_{mass} + 0.28Nb_{mass} + 0.22Ta_{mass} + 2.9Fe_{mass} + 1.6Cr_{mass} + 1.1Ni_{mass} + 1.4Co_{mass} + 0.77Cu_{mass} - Al_{mass}$, wherein Mo_{mass}, V_{mass}, W_{mass}, Nb_{mass}, Ta_{mass}, Fe_{mass}, Cr_{mass}, Ni_{mass}, Co_{mass}, Cu_{mass} and Al_{mass} are expressed in percentages by mass;

at least one interstitial solution element selected from the group consisting of O, N and C; and

the balance of Ti;

the content of Al being controlled to 1.8% by mass or less;

the solution treatment comprising the steps of:

heating the raw titanium-alloy material to form β single phase therein; and

quenching the heated raw titanium-alloy material,

whereby producing a titanium alloy being β single phase at room temperature at least.

Claim 8 (Withdrawn): The process set forth in claim 7, wherein the raw titanium-alloy material is held at a β transformation temperature or more at which the raw titanium-alloy material is turned into β single phase for from 1 to 60 minutes in the heating step.

Claim 9 (Withdrawn): The process set forth in claim 7, wherein the heated raw titanium-alloy material is quenched at a cooling rate of from 0.5 to 500 K/sec. in the quenching step.

Claim 10 (Withdrawn): The process set forth in claim 7, wherein the raw titanium-alloy material further comprises at least one additional alloying element selected from the group consisting of Zr, Hf, Sc, Mn, Sn and B in an amount of from 0.1 to 10% by mass.

Claim 11 (Previously Presented): The titanium alloy set forth in claim 1, wherein the Mo_{eq} is of from 3.5 to 10.5% by mass.

Claim 12 (Canceled).

Claim 13 (Previously Presented): The titanium alloy set forth in claim 1, wherein the at least one interstitial element is in an amount of from 0.7 to 3% by mass.

Claim 14 (Previously Presented): The titanium alloy set forth in claim 1, wherein the content of Al is 1.7 to 0.3 % by mass.

Claim 15 (New): A titanium alloy consisting of:

when the entirety is taken as 100% by mass,

at least one alloying element selected from the group consisting of molybdenum (Mo), vanadium (V), tungsten (W), niobium (Nb), tantalum (Ta), iron (Fe), chromium (Cr), nickel (Ni), cobalt (Co), copper (Cu) and aluminum (Al) in a molybdenum equivalent "Mo_{eq}" of from 3 to 11% by mass, the molybdenum equivalent determined by the following equation,

$Mo_{eq} = Mo_{mass} + 0.67V_{mass} + 0.44W_{mass} + 0.28Nb_{mass} + 0.22Ta_{mass} + 2.9Fe_{mass} + 1.6Cr_{mass} + 1.1Ni_{mass} + 1.4Co_{mass} + 0.77Cu_{mass} - Al_{mass}$, wherein Mo_{mass}, V_{mass}, W_{mass}, Nb_{mass}, Ta_{mass}, Fe_{mass}, Cr_{mass}, Ni_{mass}, Co_{mass}, Cu_{mass} and Al_{mass} are expressed in percentages by mass;

at least one additional alloying element selected from the group consisting of zirconium (Zr), hafnium (Hf), scandium (Sc), manganese (Mn), tin (Sn) and boron (B) in an amount of from 0.1 to 10% by mass;

at least one interstitial solution element selected from the group consisting of oxygen (O), nitrogen (N) and carbon (C) in an amount of from 0.6 to 3% by mass; and

the balance of titanium (Ti);

the content of Al being controlled to 1.8% by mass or less; and

being β single phase at room temperature at least.

Claim 16 (New): The titanium alloy set forth in claim 15, wherein the Mo_{eq} is of from 3.5 to 10.5% by mass.

Claim 17 (New): The titanium alloy set forth in claim 15, wherein the at least one interstitial element is in an amount of from 0.7 to 3% by mass.

Claim 18 (New): The titanium alloy set forth in claim 15, wherein the content of Al is 1.7 to 0.3 % by mass.

SUPPORT FOR THE AMENDMENT

Claim 1 is currently amended.

Claim 6 and 12 are canceled.

Claims 15-18 are added.

The amendment to claim 1 is supported throughout the present specification, e.g., paragraph [0034], as originally filed.

Claims 15-18 are supported throughout the present specification, e.g., at paragraph [0034] and [0041 to [0044], as originally filed.

No new matter has been added.

Upon entry of this amendment, claims 1-5, 7-11, and 13-18 will be pending in this application. It is noted that claims 7-10 were previously withdrawn due to a Restriction Requirement.

REQUEST FOR RECONSIDERATION

Applicants wish to thank Examiner Alexander for the courteous discussion regarding the present Office Action, the above-amendments, and the differences between the claimed invention and cited references of record. Further to the discussion, Applicants respectfully request reconsideration of the application for reasons of record and in view of the following additional remarks.

The rejection of claims 1-6 and 11 as obvious over Ahmed et al. (US Patent No. 5,871,595) is obviated by amendment.

As shown above, claim 1 has been amended to recite a titanium alloy *consisting of* the claimed elements, in which the at least one interstitial solution element is in an amount of from 0.6 to 3% by mass.

By contrast, Ahmed et al. does not describe or suggest whatsoever a titanium alloy that consists of a β single phase having an interstitial solution element in the claimed range.

Therefore, the claimed invention is novel and unobvious over the reference.

Accordingly, withdrawal of the rejection is requested.

The rejection of claims 1-6 and 11-14 as obvious over Yoshimura (JP 05-279773) is traversed and obviated by amendment.

As indicated by the Examiner, Yoshimura generally describes titanium alloys having various β phases, e.g., at paragraph [0014] of the English translation of the reference. However, a titanium alloy *consisting of* the claimed elements in a single phase is not described, suggested, or exemplified by the reference. In particular, as indicated at paragraph [0014], the various β phase alloys include a "ω phase" based on the amount of Al and Sn. However, in the claimed invention, such a phase is clearly not present. Moreover, there is no showing or evidentiary support for modifying the reference to include only the β single phase as presently claimed.